Winstar Display Co., LTD
華凌光電股份有限公司
WEB: https://www.winstar.com.tw E-mail: sales@winstar.com.tw

SPECIFICATION

CUSTOMER : _____

MODULE NO.: WF101-1024600JPL#0SP8-FC

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	**PCB VERSION:** **DATA:**

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
			葉虹蘭
ISSUED DATE: 2022/03/23			

Represented by:
first FC components
FIRST Components s.r.l.
www.first-components.com
sales@first-components.com
+39 0332 1888005

General Specifications

Item	Dimension	Unit
Size	10.1	inch
Dot Matrix	1024 RGB X 600	dots
Module dimension	235(W) x143(H) x 22.43(D)	mm
Active area	222.72 (H) x 125.28(V)	mm
Pixel pitch	0.2175(W) x 0.2088(H)	mm
LCD type	TFT, Normally Black, Transmissive	
Interface	LVDS	
Driver IC	EK79001HN + EK73215BCGA or equivalent	
Viewing Angle	85/85/85/85	
Aspect Ratio	16:9	
Backlight Type	LED,Normally White	
CTP IC	ILI2511 or equivalent	
CTP Interface	USB (I2C available)	
CTP FW Version:	V6.0.0.0.62.90.1.2	
With /Without TP	With CTP	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	℃
Storage Temperature	TST	-30	—	+80	℃

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

Electrical Characteristics

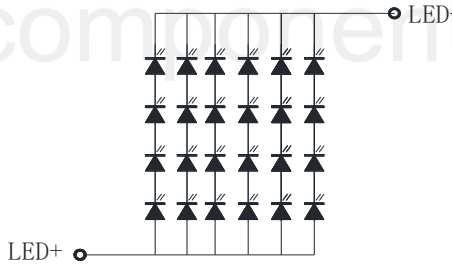
ypical Operation Conditions (At Ta = 25 °C)

Item	Symbol	Min	Typ	Max	Unit	Note
Supply Voltage For LCM +12V	DC12V	—	12.0	—	V	-
Supply Current For LCM +12V	I_{DC12V}	—	650	980	mA	-
Supply Voltage For CTP(I2C)	DC3V	3.15	3.3	3.45	V	I2C Type
Supply Current For CTP(I2C)	I_{DC3V}	—	80	120	mA	
Supply CTP	USB_DC 5V	4.75	5.0	5.25	V	USB type
	$I_{USB_DC\ 5V}$	—	100	100	mA	

Backlight Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
Backlight Enable(VLED_EN)	High Level	1.4	3.3	—	V	Note 5
	Low Level	—	—	0.8	V	Note 6
PWM Control Level (LED_PWM)	High Level	—	3.3	—	V	
	Low Level	—	0	—	V	
PWM Control Duty Ratio	-	1	—	100	%	
PWM Control Frequency	-	—	10K	—	Hz	
LED Life Time	-	50,000	—	—	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



CIRCUIT DIAGRAM

Note 2 : Ta = 25 ℃

Note 3 : Brightness to be decreased to 50% of the initial value

Note 4 : The single LED lamp case

Note 5 : Turn ON the backlight when BL_ON=High, Turn OFF when BL_ON=Low

Note 6 : PWM_BL Control from low active.

Note 7 : Due to exactly current only 168ma, need to decrease the current to avoid the IC hot issue.

Optical Characteristics

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Response time		Tr	θ=0°、Φ=0°	-	10	20	.ms	Note 3
		Tf		-	20	25	.ms	
Contrast ratio		CR	At optimized viewing angle	600	800	-	-	Note 4
Color Chromaticity	White	Wx	θ=0°、Φ=0	0.252	0.302	0.352	-	Note 2,6,7
		Wy		0.274	0.324	0.374	-	
Viewing angle	Hor.	ΘR	CR≧10	80	85	-	Deg.	Note 1
		ΘL		80	85	-		
	Ver.	ΦT		80	85	-		
		ΦB		80	85	-		
Brightness		-	-	800	900	-	cd/m^2	Center of display
Uniformity		(U)	-	70	-	-	%	Note 5

Ta=25±2℃

Note 1: Definition of viewing angle range

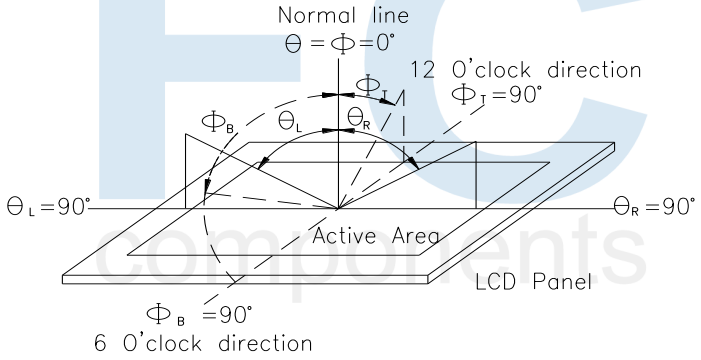


Fig. 7.1. Definition of viewing angle

Note 2: Test equipment setup:

After stabilizing and leaving the panel alone at a driven temperature for 10 minutes, the measurement should be executed. Measurement should be executed in a stable, windless, and dark room. Optical specifications are measured by Topcon BM-7 or BM-5 luminance meter 1.0° field of view at a distance of 50cm and normal direction.

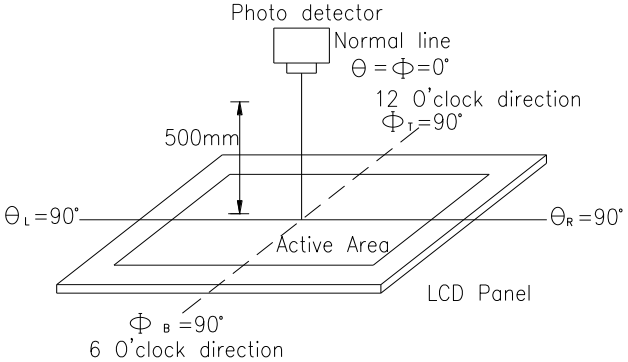


Fig. 7.2. Optical measurement system setup

Interface

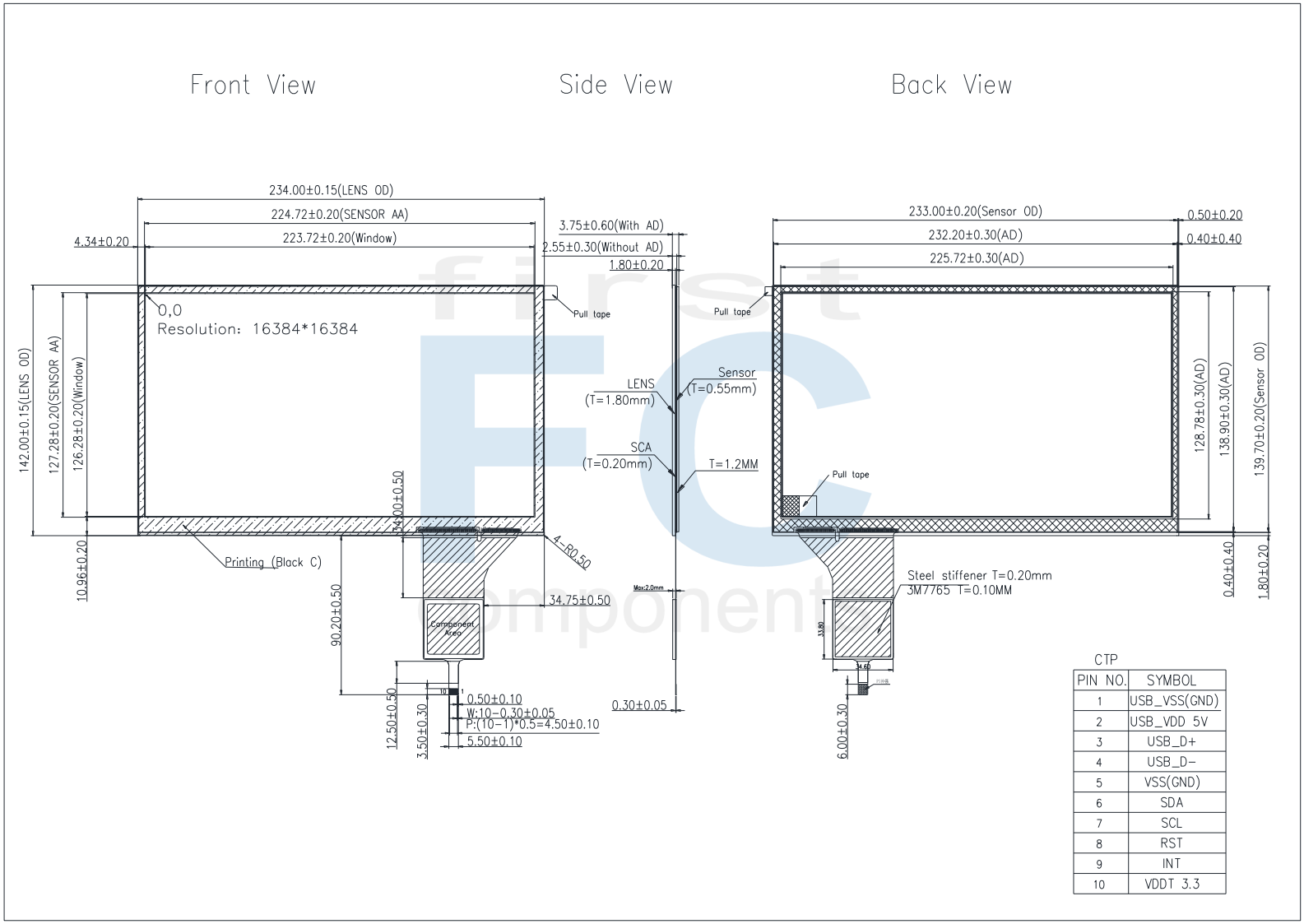
TFT LCD MODULE

Pin No.	Symbol	Description
1-3	DC12V	Digital power
4	NC	No connection
5-7	GND	Digital ground
8	Rxin0-	Negative LVDS differential data inputs
9	Rxin0+	Positive LVDS differential data inputs
10	GND	Digital ground
11	Rxin1-	Negative LVDS differential data inputs
12	Rxin1+	Positive LVDS differential data inputs
13	GND	Digital ground
14	Rxin2-	Negative LVDS differential data inputs
15	Rxin2+	Positive LVDS differential data inputs
16	GND	Digital ground
17	RxCLK-	Negative LVDS differential clock inputs
18	RxCLK+	Positive LVDS differential clock inputs
19	GND	Digital ground
20	Rxin3-	Negative LVDS differential data inputs
21	Rxin3+	Positive LVDS differential data inputs
22	GND	Digital ground
23	LED_PWM	Backlight control signal
24	USB_DC5V	Power supply for CTP (USB type)
25	DC3V	Power supply for CTP (I2C Type)
26	USB_D+	Data + (CTP)
27	GND	Digital ground
28	SDA	I2C data input and output(CTP)
29	SCL	I2C clock input(CTP)
30	INT	External interrupt to the host(CTP)
31	RST	External Reset, Low is active(CTP)
32	GND	Digital ground
33	USB_D-	Data -(CTP)
34-43	NC	No connection

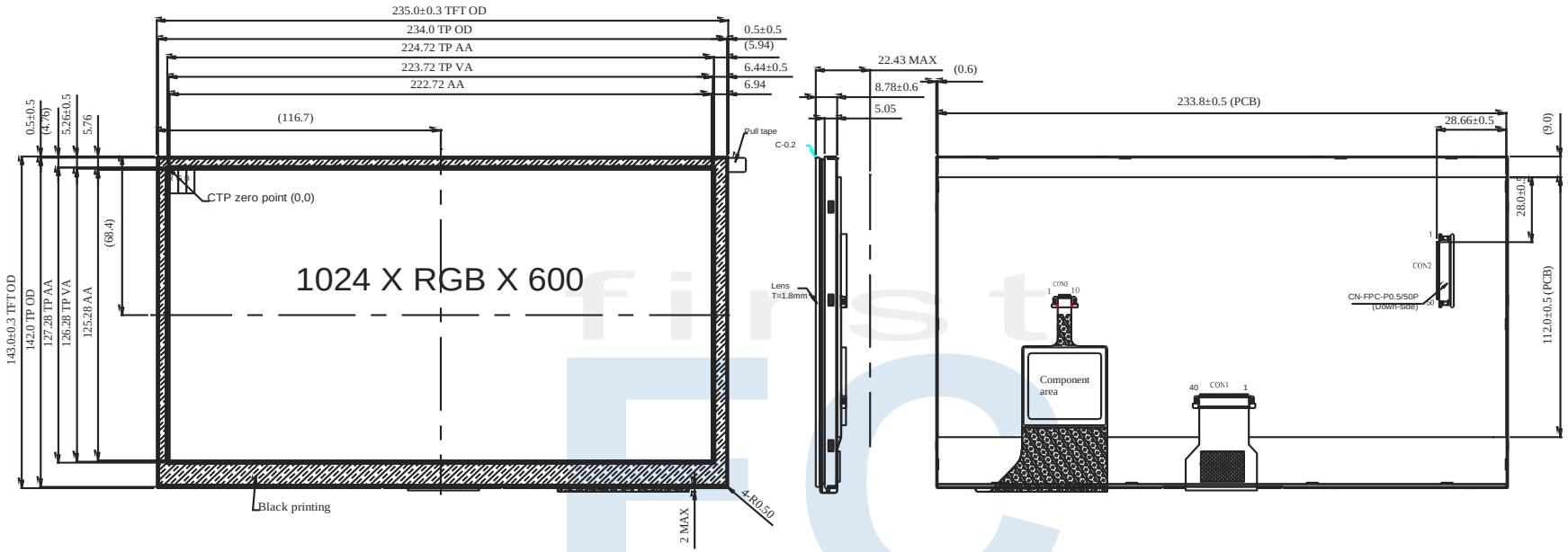
44-46	GND	Digital ground
47	NC	No connection
48-50	DC12V	Digital power

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Touch Panel Information



Contour Drawing



CON2

PIN NO.	SYMBOL	PIN NO.	SYMBOL	PIN NO.	SYMBOL	PIN NO.	SYMBOL	PIN NO.	SYMBOL
1	DC12V	11	Rxin1-	21	Rxin3+	31	RST	41	NC
2	DC12V	12	Rxin1+	22	GND	32	GND	42	NC
3	DC12V	13	GND	23	LED_PWM	33	USB_D-	43	NC
4	NC	14	Rxin2-	24	USB_DC 5V	34	NC	44	GND
5	GND	15	Rxin2+	25	DC3V	35	NC	45	GND
6	GND	16	GND	26	USB_D+	36	NC	46	GND
7	GND	17	RxCLK-	27	GND	37	NC	47	NC
8	Rxin0-	18	RxCLK+	28	SDA	38	NC	48	DC12V
9	Rxin0+	19	GND	29	SCL	39	NC	49	DC12V
10	GND	20	Rxin3-	30	INT	40	NC	50	DC12V

The non-specified tolerance of dimension is ±0.3 mm .